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(54) HERBICIDAL COMPOSITION

(57)Abstract:

PURPOSE: To obtain a non-selective herbicide composition quick in the expression of herbicidal effect and excellent in herbicidal activity.

CONSTITUTION: This is composed of at least one kind of adjuvant selected from a group consisting of an organic silicone, polyoxyethylene isotridecanol ether, polyoxyethylene dodecyl ether, tallow amino ether, EO/PO block copolymer, EO/PO aliphatic alcohol ether and polyoxyethylene nonylphenyl ether, preferably consisting of the organo silicone, polyoxyethylene isotridecanol ether and polyoxyethylene dodecyl ether, and a non-selective herbicide. The non- selective herbicide is a combination of glufosinate and 3-(3,4-dichlorophenyl)-1,1,1- dimethyl urea (DCMU) or that of bialaphos and DCMU. This composition enables the quick expression of herbicidal effect and accordingly increases herbicidal. efficiency.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[The technical field to which invention belongs] this invention relates to the weeding-out nature constituent containing ************** which is the non-selective herbicide which an operation manifestation of a herbicide is brought [selective herbicide] forward and increases the weeding-out effect, or a support.

[0002]
[Description of the Prior Art] ************** is a non-selective herbicide which contains DCMU [3-(3, 4-dichlorophenyl)-1 and 1-dimethyl urea] with guru ********** (ammonium-DL-gay alanine-4-**** (methyl) **************) with the strong forage processing force, and a soil treatment effect as an active principle. Moreover, a support is a non-selective herbicide which contains beer ****** {the specific salt of an L-2-amino-4-[(*********) (methyl)******** noil] butyryl-L-alanyl-L-alanine}, and DCMU as an active principle. These herbicides have the capacity which also withers the weeds before occurrence, and have the characteristic feature that a **** term is very long at the same time they wither the weeds under growth.

[0003]
[Problem(s) to be Solved by the Invention] However, the weeding-out operation manifestation of these non-selective herbicides was very delayed effect-like, and authentication of the early weeding-out effect was not easy for it. Furthermore, as compared with each ** agent of guru ********** which is one of the active principles of these herbicides, or beer ******, the fault of being weak also had a forage treatment effect. this invention compensates such a fault, brings a weeding-out operation manifestation forward, and aims to let the weeding-out effect offer a more positive new weeding-out nature constituent.

[0004]
[Means for Solving the Problem] By carrying out mixed use use of ************** which is a non-selective herbicide, or the support with the adjuvant which is a wetting agent, this invention persons brought the weeding-out operation manifestation forward to the wonderful grade, found out that the weeding-out effect increased, and completed this invention.

[0005]
[Embodiments of the Invention] this invention is a weeding-out nature constituent characterized by containing ************** or the support which is an organic silicon system, the polyoxyethylene iso tridecanol ether, polyoxyethylene dodecylether, the beef tallow amino ether, an EO/PO block copolymer, the EO/PO fatty-alcohol ether, the polyoxyethylene nonylphenyl ether, one kind of adjuvant chosen out of the group which consists of an organic silicon system, the polyoxyethylene iso tridecanol ether, and polyoxyethylene dodecylether preferably, and a non-selective herbicide.

[0006] In this invention, ************** is the tradename of the non-selective herbicide of Japanese ******, Inc., and is a herbicide which contains guru ********** and DCMU as the active principle. Moreover, support water dispersible powder is the tradename of the non-selective herbicide of Meiji Seika Kaisha, Ltd., and is a herbicide which contains beer ****** and DCMU as the active principle.

[0007] The adjuvant used by this invention is called wetting agent which has the work which generally raises the wettability of a vegetable sheet, and can be applied as mixture for aquosity spraying together with ************** or a support. Th concentration of the adjuvant in this mixture for aquosity spraying is usually 0.25 - 1.0 % of the weight preferably 0.01 to 10% of the weight. Moreover, the desirable amount of the water used is 100-150L/10a.

[0008] As an adjuvant used by this invention, [the product made from tradename Silwet L-77 (Silwet L-77) Japan ********* or sill guard 309 (Sylgard 309) Dow Corning Toray Silicone make] is mentioned, for example as quality of an assistant of an organic silicon system. As quality of an assistant of the polyoxyethylene iso tridecanol ether, there are [tradename:Genapol (Genapol X-060), a product made from ******** (Hoechst AG)], etc. as an example of the desirable matter especially. Moreover, there are [tradename surfactant WK and MARUWA Biochemical] as an example of the desirable matter especially as quality of an assistant of polyoxyethylene dodecylether.

[0009]
[Example] Hereafter, the example of a bioassay is shown.
(Example 1) The examination bowl of No. 4 in a greenhouse was filled up with soil, and the suitable amount, or **** and a seeding were performed for the soil with which the semen of a crabgrass was mixed on it. It was made to grow in a greenhouse until the grass quantity of a crabgrass was set to about 25 - 30cm, and the bowl was placed into the processing area of 2 0.25m, and forage processing was uniformly performed for the medical fluid adjusted to the specified quantity in processing area from the upper part using the spray. inspersion -- amount of water was taken as 100L/10a Four days after medicine processing and after (seven days, 14 days, and 21 days), investigation performed the killing plant grade according to the criteria of 0 (he has no effect)-10 (full apoptosis), and showed these results in Table 1.
[0010]

[Table 101]

第 1 表

薬剤	製剤薬量 (ml／10a)	補助剤			メヒシバ殺草指数 4D	7D	14D	21D
薬剤1	500	無添加			1	2	7	9
	750	無添加			1	3	7	9
	250	補助剤	A	0.5%	4	6	8	9
	500	補助剤	A	0.5%	4	6	8	9
	250	補助剤	B	0.5%	3	6	9.5	10
	500	補助剤	B	0.5%	3	6	9	9.5
	250	補助剤	C	0.5%	2	5	9.5	10
	500	補助剤	C	0.5%	3	8	10	10
	250	補助剤	D	0.5%	5	5	9	9.5
	500	補助剤	D	0.5%	4	5	9	9.5
薬剤2	500	無添加			5	7	8	9

[0011]
[Table 102]

第　1　表　（続き）

薬剤	製剤薬量 (g／10a)	補助剤			メヒシバ殺草指数 4D	7D	14D	21D
薬剤3	500	無添加			1	6	9	10
	750	無添加			1	6	10	9
	250	補助剤	A	1.0%	9	9	10	10
	500	補助剤	A	1.0%	9	10	10	10
	250	補助剤	B	1.0%	9	10	10	10
	500	補助剤	B	1.0%	9	10	10	10
	250	補助剤	C	1.0%	7	10	10	10
	500	補助剤	C	1.0%	9	10	10	10
	250	補助剤	D	1.0%	8	9	10	10
	500	補助剤	D	1.0%	8	10	10	10

[0012] the [in addition,] -- as for 7D, 14 days after processing and 21D will mean the 21 days back of processing for 4D seven days after processing four days after processing among 1 table, respectively, as for 14D Moreover, the medicines 1, 2, and 3 and adjuvant in Table 1 A, B, C, and D are as follows, respectively.
Medicine 1: Guru ********* +DCMU (**************:Nippon Soda Co., Ltd. make)
Medicine 2: Guru ********** (Buster : product made from ********)
Medicine 3: Beer ****** +DCMU (support water-dispersible-powder:Meiji Seika Kaisha, Ltd. make)
Adjuvant A:Silwet L-77 adjuvant B:Sylgard 309 adjuvants C:Genapol X-060 adjuvant D:surfactant WK [0013] Silwet which is an adjuvant at these as compared with the case of processing [table / 1st] of only ************** (guru ********** +DCMU) or a support (beer ****** +DCMU) L-77, Sylgard 309, Genapol When each was added for X-060 and the surfactant WK, increasing the earliness and weeding-out activity of a weeding-out operation manifestation to a very remarkable grade was shown. Especially the earliness of a weeding-out operation manifestation is improved considerably, and became equivalent to guru ********** by which an operation manifestation is made early.
[0014] (Example 2) The medical fluid which adjusted the medicine and the adjuvant to a processing division which becomes the lower grass of **** a ** place examination crabgrass, ******, and whose redroot pigweed ** are dominant with 2 27m per division at the specified quantity was carried on the back, and it processed using the formula hand-pushed sprayer. The stages of the weeds at the time of processing were a crabgrass (a growth period-anthesis, 15 to 40 cm grass quantity), ****** (a growth period-anthesis, 25 to 60 cm grass quantity), and a redroot pigweed (a growth period-arrival caliculus time, 20 to 60 cm grass quantity). inspersion -- amount of water was taken as 150L/10a (the medicine 4 was set to 100L/10a) Investigation made the killing plant grade the whole processing division four days after medicine processing and after (15 days and 29 days), and was performed according to the criteria of 0 (he has no effect)-10 (full apoptosis), and these results were shown in the 2nd table.
[0015]
[Table 2]

第 2 表

薬剤	製剤薬量 (ml／10a)	補助剤			殺草指数（処理区全体）		
					4D	15D	29D
薬剤1	250	無添加			3	7	6 (－)
	500	無添加			4	9	8 (－)
	250	補助剤	A	1.0%	9	8	7 (－)
	250	補助剤	B	1.0%	9	9.8	9.8 (－)
	250	補助剤	C	1.0%	9	9.5	9 (－)
	250	補助剤	D	0.5%	7	9.5	9.5 (－)
薬剤2	500	無添加			8	9.5	8 (＋)
薬剤4	500	無添加			8	10	9.8 (＋)

[0016] As for 4D, 29D will mean the 29 days back of processing seven days after processing four days after processing among the 2nd table, as for 15D, and the inside of ( ) of 29D shows the late-coming student of weeds. The criteria are the mind of ** at (-) - (+5), i.e., nothing, - an emergency. Moreover, the medicines 1, 2, and 4 and the adjuvants A, B, C, and D in Table 2 express the following.
Medicine 1: Guru ********** +DCMU (product made from **************:Japanese ****** Co.)
Medicine 2: Guru ********** (product made from buster:********)
Medicine 4: ************ (round rise:Monsanto Co. make).
Adjuvant A:Silwet L-77 adjuvant B:Sylgard 309 adjuvants C:Genapol X-060 adjuvant D:surfactant WK [0017] As shown in the 2nd table, a weeding-out operation manifestation and weeding-out activity increased by addition of four kinds of each adjuvant offered as a sample also in the ** place like the examination in a greenhouse. The **** term of the medicine 1 which added the adjuvant was as unchanging as the adjuvant additive-free medicine 1, and increasing a weeding-out operation manifestation and weeding-out activity to a very remarkable grade was shown, without spoiling the soil processing activity by DCMU which is one of the active principles of a medicine 1 by adding adjuvants A, B, and C and each D to a non-selective herbicide.
[0018]
[Effect of the Invention] As explained above, the weeding-out nature constituent of this invention contains ************** which is a non-selective herbicide or a support, and a specific adjuvant, and has wonderfully the weeding-out effect which was excellent in the weeding-out operation manifestation early as compared with the case of each medicine independent use.

[Translation done.]

CLAIMS

[Claim(s)]
[Claim 1] The weeding-out nature constituent characterized by containing at least one kind of adjuvant chosen out of the group which consists of an organic silicon system, the polyoxyethylene iso tridecanol ether, polyoxyethylene dodecylether, the beef tallow amino ether, an EO/PO block copolymer, the EO/PO fatty-alcohol ether, and the polyoxyethylene nonylphenyl ether, and a non-selective herbicide.
[Claim 2] The weeding-out nature constituent characterized by containing one kind of adjuvant chosen out of the group which consists of an organic silicon system, the polyoxyethylene iso tridecanol ether, and polyoxyethylene dodecylether, and a non-selective herbicide.
[Claim 3] The weeding-out nature constituent according to claim 1 which is the mixture into which a non-selective herbicide contains the mixture or beer ******, and DCMU containing guru ********** and DCMU.
[Claim 4] The constituent for aquosity spraying of the non-selective herbicide characterized for an adjuvant according to claim 1 by 0.01 or containing 10% of the weight.

[Translation done.]